



中文核心期刊  
中国科技核心期刊  
中国科学引文数据库(CSCD)来源期刊  
RCCSE中国核心学术期刊(A)  
中国农林核心期刊

ISSN 2095-1191  
CODEN NNXAAB

# 南方农业学报

Nanfang Nongye Xuebao

第52卷 第5期 2021年5月

Journal of Southern Agriculture

Vol.52 No.5 May 2021

5

2021

广西壮族自治区农业科学院 主办  
Sponsored by Guangxi Academy of Agricultural Sciences

科学出版社 出版  
Published by Science Press



# 南方农业学报

Nanfang Nongye Xuebao

第52卷 第5期 2021年5月

## 目次

### 优秀青年学者论坛

- 1139 利巴韦林干预对肉鸡肠道微生物群落结构的影响  
..... 徐俊,侯玉洁,谢敏,王梦芝,邬磊,费丹,周瑶敏,胡丽芳
- 1149 贵州芸薹黄化病毒的分子检测及基因型鉴定  
..... 王莉爽,李淳,陈小均,何海永,陈文,黄露,刘学辉

### 作物遗传育种·种质资源·分子生物学

- 1158 栽培番茄与野生番茄NBS-LRR类抗病基因家族的全基因组鉴定及表达分析  
..... 史建磊,熊自立,苏世闻,张海利,宰文珊
- 1167 水稻细菌性条斑病抗性基因 *bls2* SSR 分子标记开发  
..... 罗登杰,万瑶,覃雪梅,施力军,张慧,李容柏,刘芳
- 1174 基于SRAP分子标记的51份西瓜抗、感病毒病种质资源遗传多样性分析  
..... 高宁宁,李晓慧,康利允,常高正,梁慎,徐小利,李海伦,王慧颖,赵卫星
- 1183 广西地方稻种资源的收集与鉴定评价  
..... 张宗琼,杨行海,李丹婷,邓国富,郭辉,梁云涛,徐志健,曾宇,夏秀忠,农保选

### 生理生化·土壤肥料·农业生态环境

- 1191 小麦秸秆高量覆盖对棉花生长发育及产量形成的影响 ..... 许冬,万鹏,褚世海,李儒海
- 1198 马铃薯间作玉米对马铃薯生长、产量及糖类物质的影响  
..... 田双燕,张应龙,何天久,牛力立,王庆,吴再辉,肖力力,田山君
- 1206 生物有机硒对不同水稻品种主要性状、重金属含量及硒吸收的影响  
..... 余侃,肖秋水,黄思思,龙小玲,蔡端午,刘金龙,郑威
- 1215 不同硒肥施用模式对冬种马铃薯硒含量、产量及品质的影响  
..... 潘丽萍,邢颖,陈锦平,李春光,黄菊香,覃金环,黄婵婵,刘永贤
- 1222 菜用黄麻不同生育期各部位有机硒的分布特性 ..... 侯文焕,唐兴富,廖小芳,李初英,赵艳红

### 植物保护·农业气象

- 1229 葡萄霜霉菌糖基水解酶基因家族的生物信息学分析  
..... 刘露露,曲俊杰,潘凤英,孙大运,郭泽西,尹玲
- 1238 香蕉套种黑皮冬瓜对香蕉枯萎病的防控效果及土壤微生物群落的影响  
..... 李朝生,田丹丹,覃柳燕,韦绍龙,韦莉萍,韦弟,黄素梅,周维,何章飞
- 1246 云南省马铃薯疮痂链霉菌种群分布及环境相关因子分析  
..... 罗山,巩晨,赵庆云,杨梦萍,杜魏甫,伏雪,张保菊,于德才,张红骥
- 1255 不同轮作模式对马铃薯根际土壤真菌群落的影响  
..... 姚姿婷,杨炎昌,姚潇,何团,郑虚,蒙炎成,邹承武
- 1263 二甲四氯植物内生降解菌的筛选、鉴定及降解特性研究  
..... 封国君,杜良伟,龙迪,曾东强,王彦辉

万方数据

## 园艺·园林·林业

- 1273 贵州高海拔区糖心苹果果实品质特征及成因分析  
..... 冯建文,韩秀梅,宋莎,王红林,解璞,杨华,李顺雨,吴亚维
- 1282 碱性含腐植酸营养液对樱桃番茄产质量影响及其改土效果  
..... 邓爱妮,罗金辉,苏初连,酒元达,刘子记,杨衍,赵敏
- 1291 广东黄心树种质表型与遗传多样性分析  
..... 丁释丰,高筱钰,吴林源,黄稚清,秦新生,冯志坚
- 1300 植物激素和光暗培养条件对卷丹百合再生体系的影响  
..... 刘彦珍,郜新强,张元臣,陈思,郝静,吕有军
- 1310 城乡特色核桃防护林树种配置结构对空气颗粒物及温湿度的影响  
..... 胡梦玲,彭小东,阿丽亚·拜都热拉,买尔旦·阿不都卡德,孙桂丽

## 加工·贮藏·质量安全

- 1319 可食椰衣纤维椰子果皮苦涩味道缺失与酚类和糖类物质含量的关系  
..... 刘蕊,张军,范海阔
- 1325 炭疽病胁迫下采后香蕉的膜脂代谢  
..... 吴小建,陈茜,梁朋光,赵承刚,栾会燕,谢祖强,冯小青,向昱,杨兆杏,何雪梅
- 1334 不同紫芽茶叶香气成分分析  
..... 吴玲玲,梁光志,张秀芬,冯红钰,罗莲凤,覃仁源,李子平,莫小燕,刘汉焱
- 1343 一年两收栽培夏黑葡萄香气成分分析  
..... 陈彦蓓,罗惠格,陆媚,农慧兰,白扬,林玲,白先进,曹雄军,陈爱军,王博

## 畜牧·兽医·水产·蚕桑

- 1353 大珠母贝组织蛋白酶B基因克隆及其表达分析  
..... 徐扬,王姿曼,李俊辉,梁飞龙,邓岳文,杨创业
- 1362 罗氏沼虾淀粉酶基因克隆及其表达规律分析  
..... 姜建萍,杨学明,袁翔,邱庆庆,杨秀荣,蒋钦杨,黄光华,蒋和生
- 1370 猪伪狂犬病毒体外诱导RAW264.7细胞炎症反应模型的建立  
..... 任春芝,谢映红,王秋华,韦英益,胡庭俊
- 1378 红螯螯虾卵黄蛋白原VWD结构域的原核表达及纯化  
..... 文露婷,许艺兰,童桂香,黄黎明,杨彦豪,杜雪松,黄光华,韦信贤,王瑞,杨慧赞
- 1387 三斑海马骨骼染色方法改进及骨骼结构特点研究  
..... 周胜杰,胡静,杨其彬,杨蕊,于刚,马振华
- 1395 罗氏沼虾同工酶表达组织差异性及其遗传多样性分析  
..... 周迅,戴习林

## 农业信息技术·农业经济

- 1405 广西甘蔗生产规模比较优势空间格局特征及影响因素分析  
..... 常慧杰,范稚莲,莫良玉,陆桂军,梁琼,朱芝燕,范业康
- 1414 我国林业全要素生产率地区的收敛性分析  
..... 刘冬,王欣,吕园
- 1422 互联网技术发展对我国农业经济结构影响实证分析  
..... 邓志英,黄毅,方威,熊曦

本期执行编辑:邓慧灵

期刊基本参数:CN 45-1381/S\*1940\*m\*A4\*290\*zh\*P\* ¥ 45.00\*1000\*34\*2021-05

# Journal of Southern Agriculture

Vol.52 No.5, 2021

## Contents

### Outstanding Young Scholars Forum

- 1139 Effects of ribavirin intervention on intestinal microbial community structure in broilers  
..... XU Jun, HOU Yu-jie, XIE Min, WANG Meng-zhi, WU Lei, FEI Dan, ZHOU Yao-min, HU Li-fang
- 1149 Molecular detection and genotype identification of *Brassica yellows virus* in Guizhou  
..... WANG Li-shuang, LI Chun, CHEN Xiao-jun, HE Hai-yong, CHEN Wen, HUANG Lu, LIU Xue-hui

### Crop Genetics & Breeding · Germplasm Resources · Biotechnology

- 1158 Genome-wide identification and evaluation of NBS-LRR disease-resistant gene family in cultivated tomatoes and wild tomatoes  
..... SHI Jian-lei, XIONG Zi-li, SU Shi-wen, ZHANG Hai-li, ZAI Wen-shan
- 1167 Development of SSR molecular markers for bacterial leaf streak resistance gene *bls2* in rice (*Oryza sativa* L.)  
..... LUO Deng-jie, WAN Yao, QIN Xue-mei, SHI Li-jun, ZHANG Hui, LI Rong-bai, LIU Fang
- 1174 Genetic diversity analysis of 51 antivirus and susceptible germplasm resources of watermelon by SRAP molecular markers  
..... GAO Ning-ning, LI Xiao-hui, KANG Li-yun, CHANG Gao-zheng, LIANG Shen, XU Xiao-li, LI Hai-lun, WANG Hui-ying, ZHAO Wei-xing
- 1183 Collection, identification and evaluation of rice landraces germplasm resources in Guangxi  
..... ZHANG Zong-qiong, YANG Xing-hai, LI Dan-ting, DENG Guo-fu, GUO Hui, LIANG Yun-tao, XU Zhi-jian, ZENG Yu, XIA Xiu-zhong, NONG Bao-xuan

### Physiology & Biochemistry · Soil & Fertilizer · Agroecology Environmet

- 1191 Effects of wheat straws under high dosage on growth and yield formation of cotton  
..... XU Dong, WAN Peng, CHU Shi-hai, LI Ru-hai
- 1198 Effects of potato-maize intercropping on potato growth, yield and carbohydrate  
..... TIAN Shuang-yan, ZHANG Ying-long, HE Tian-jiu, NIU Li-li, WANG Qing, WU Zai-hui, XIAO Li-li, TIAN Shan-jun
- 1206 Effects of bioorganic selenium on main characters, heavy metal content and selenium absorption of different rice varieties  
..... YU Kan, XIAO Qiu-shui, HUANG Si-si, LONG Xiao-ling, CAI Duan-wu, LIU Jin-long, ZHENG Wei
- 1215 Effects of different fertilization modes of selenium on selenium content, yield and quality of winter cropping potatoes  
..... PAN Li-ping, XING Ying, CHEN Jin-ping, LI Chun-guang, HUANG Ju-xiang, QIN Jin-huan, HUANG Chan-chan, LIU Yong-xian
- 1222 Distribution characteristics of organic selenium in different parts of vegetable jute at different growth stages  
..... HOU Wen-huan, TANG Xing-fu, LIAO Xiao-fang, LI Chu-ying, ZHAO Yan-hong

### Plant Protection · Agrometeorology

- 1229 Bioinformatic analysis of glycoside hydrolases gene family in *Plasmopara viticola*  
..... LIU Lu-lu, QU Jun-jie, PAN Feng-ying, SUN Da-yun, GUO Ze-xi, YIN Ling
- 1238 Effects of interplanting of banana with black-skinned wax gourd on controlling *Fusarium* wilt and soil microbial community  
..... LI Chao-sheng, TIAN Dan-dan, QIN Liu-yan, WEI Shao-long, WEI Li-ping, WEI Di, HUANG Su-mei, ZHOU Wei, HE Zhang-fei
- 1246 Population distribution and environment related factors of *Streptomyces* spp. on potato in Yunnan  
..... LUO Shan, GONG Chen, ZHAO Qing-yun, YANG Meng-ping, DU Wei-fu, FU Xue, ZHANG Bao-ju, YU De-cai, ZHANG Hong-ji
- 1255 Effects of different crop rotation modes on fungal community in potato rhizosphere soil  
..... YAO Zi-ting, YANG Yan-chang, YAO Xiao, HE Tuan, ZHENG Xu, MENG Yan-cheng, ZOU Cheng-wu

- 1263 Screening, identification and characteristics of 2-methyl-4-chlorophenoxyacetic acid -degrading endophytic fungus from plants ..... FENG Guo-jun, DU Liang-wei, LONG Di, ZENG Dong-qiang, WANG Yan-hui

### Horticulture · Landscape Architecture · Forestry

- 1273 Fruit quality characters and causes of watercore apple in high altitude areas of Guizhou ..... FENG Jian-wen, HAN Xiu-mei, SONG Sha, WANG Hong-lin, XIE Pu, YANG Hua, LI Shun-yu, WU Ya-wei
- 1282 Effects of alkaline humic acid fertilizer amendment on cherry tomato yield and quality and soil improvement ..... DENG Ai-ni, LUO Jin-hui, SU Chu-lian, JIU Yuan-da, LIU Zi-ji, YANG Yan, ZHAO Min
- 1291 Phenotype and genetic diversity of *Machilus gamblei* King ex Hook. f. germplasm in Guangdong ..... DING Shi-feng, GAO Xiao-yu, WU Lin-yuan, HUANG Zhi-qing, QIN Xin-sheng, FENG Zhi-jian
- 1300 Effects of plant hormones and light or dark culture conditions on the regeneration system of *Lilium lancifolium* Thunb ..... LIU Yan-zhen, GAO Xin-qiang, ZHANG Yuan-chen, CHEN Si, HAO Jing, LYU You-jun
- 1310 Influence of special *Juglans regia* shelterbelts species configuration structure on air particulate matter, temperature and humidity in urban and rural areas ..... HU Meng-ling, PENG Xiao-dong, Aliya Baidourela, Maierdan Abudukadeer, SUN Gui-li

### Processing · Storage · Quality Safety

- 1319 Relationship between the absence of bitter and astringency for edible fiber coconut pericarp and the content of phenols and saccharides ..... LIU Rui, ZHANG Jun, FAN Hai-kuo
- 1325 Membrane lipid metabolism of postharvest banana under anthracnose stress ..... WU Xiao-jian, CHEN Xi, LIANG Peng-guang, ZHAO Cheng-gang, LUAN Hui-yan, XIE Zu-qiang, FENG Xiao-qing, XIANG Yu, YANG Zhao-xing, HE Xue-mei
- 1334 Aroma components in different purple bud teas ..... WU Ling-ling, LIANG Guang-zhi, ZHANG Xiu-fen, FENG Hong-yu, LUO Lian-feng, QIN Ren-yuan, LI Zi-ping, MO Xiao-yan, LIU Han-yan
- 1343 Aroma components analysis of Summer Black grape under two-crops-a-year cultivation ..... CHEN Yan-bei, LUO Hui-ge, LU Mei, NONG Hui-lan, BAI Yang, LIN Ling, BAI Xian-jin, CAO Xiong-jun, CHEN Ai-jun, WANG Bo

### Animal Science · Veterinary Science · Aquiculture · Sericulture

- 1353 Cloning and expression analysis of cathepsin B gene from *Pinctada maxima* ..... XU Yang, WANG Zi-man, LI Jun-hui, LIANG Fei-long, DENG Yue-wen, YANG Chuang-ye
- 1362 Cloning of amylase gene in *Macrobrachium rosenbergii* and its expression regulation ..... JIANG Jian-ping, YANG Xue-ming, YUAN Xiang, QIU Qing-qing, YANG Xiu-rong, JIANG Qin-yang, HUANG Guang-hua, JIANG He-sheng
- 1370 Establishing inflammatory response model of RAW264.7 cells induced by pseudorabies virus *in vitro* ..... REN Chun-zhi, XIE Ying-hong, WANG Qiu-hua, WEI Ying-yi, HU Ting-jun
- 1378 Prokaryotic expression and purification of VWD domain in vitellogenin of *Cherax quadricarinatus* ..... WEN-Lu-ting, XU Yi-lan, TONG Gui-xiang, HUANG Li-ming, YANG Yan-hao, DU Xue-song, HUANG Guang-hua, WEI Xin-xian, WANG Rui, YANG Hui-zan
- 1387 Skeleton staining method improvement and skeleton structure character description of *Hippocampus trimaculatus* ..... ZHOU Sheng-jie, HU Jing, YANG Qi-bin, YANG Rui, YU Gang, MA Zhen-hua
- 1395 Isozyme expression tissue difference and genetic diversity of *Macrobrachium rosenbergii* ..... ZHOU Xun, DAI Xi-lin

### Agricultural Information Technology · Agriculture Economics

- 1405 Spatial pattern characteristics and influencing factors of comparative advantage of sugarcane production scale in Guangxi ..... CHANG Hui-jie, FAN Zhi-lian, MO Liang-yu, LU Gui-jun, LIANG Qiong, ZHU Zhi-yan, FAN Ye-geng
- 1414 Convergence of forestry total factor productivity of China ..... LIU Dong, WANG Xin, LYU Yuan
- 1422 An empirical study on the impact of internet technology development on agricultural economic structure in China ..... DENG Zhi-ying, HUANG Yi, FANG Wei, XIONG Xi